

## **Who is most at risk of HIV infection? Detailed data tables and technical notes**

### ***Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data***

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2014, this resulted in the removal of 4,135 HIV/AIDS cases, of which 973 have died and 3,162 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location at diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS Surveillance System. The cases are assigned to the state that reports the earliest date of AIDS diagnosis if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that previous HIV/AIDS fact sheets, data reports and presentations included cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual exposure mode category for males; those cases have been reassigned to the no identified risk (NIR) exposure mode category. The presumed heterosexual exposure mode category was used with the intention of identifying HIV exposure mode for females when sex with males is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of females living with HIV/AIDS and 40% of recent female HIV diagnoses are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

### ***Background on HIV reporting system***

On January 1, 1999 the Massachusetts Department of Public Health (MDPH) started requiring healthcare providers to submit case report forms, with demographic and risk information on individuals diagnosed with HIV infection, as they had been doing for AIDS since 1983. Existing cases of HIV infection diagnosed through 1998 also were to be reported by the end of 1999. When comparing HIV infection diagnosed before 1999 to HIV infection diagnosed after 1999, one should consider the differences in HIV reporting requirements for these two time periods. Since HIV was not reported at diagnosis prior to 1999 and clinical providers were given a relatively short time frame within which to report all prevalent HIV cases, the pre-1999 data are considered less complete than data reported after 1999. Additionally, pre-1999 HIV infection diagnoses do not include people who were diagnosed with HIV infection and who died before 1999 without being reported with AIDS, nor do they include individuals who were no longer receiving HIV-related health care in Massachusetts at the point when HIV (non-AIDS) reporting became mandatory.

### ***Caveats of the data***

While trends in new HIV diagnoses are the best indicator for those who are presently most at risk of HIV infection, HIV surveillance reflects only incident diagnoses among people who are in care and not the actual incidence of new infections. Like AIDS diagnoses, HIV infection diagnoses are not a direct measure of incidence of infection itself. People may be living with HIV infection for many years prior to being tested and seeking care, at which point the case is considered a “diagnosis” and reported to the MDPH HIV/AIDS Surveillance Program. Furthermore, as with early data for AIDS cases, the data from the first few years of a new reporting system can be unstable, and caution should be used in interpretation. During the time a reporting system is in its infancy, there is a greater likelihood that fluctuations in data are attributable to reporting patterns and clinician education efforts rather than actual changes in incidence.

One must consider the effects of reporting lag on reported HIV infection diagnoses in the most recent years. Although Massachusetts regulations require providers to submit HIV case reports in a timely fashion, many 2012 HIV infection diagnoses will be reported to the surveillance program after the release of this Epidemiologic Profile. Thus, the 2012 data presented in this report may represent an undercount. Previous analyses of Massachusetts HIV/AIDS case data have suggested that the distribution of HIV infection diagnoses by race/ethnicity, gender and exposure mode for cases reported more than 6 months after diagnosis was not substantially different than the distribution of HIV cases reported within 6 months. Caution should be exercised when considering changes in HIV diagnosis trends for 2012.

**Table 1. People diagnosed with HIV infection by gender and year of diagnosis: Massachusetts<sup>1</sup> 2003–2012<sup>2</sup>**

	Male		Female		Total
	N	%	N	%	
2003	649	68%	309	32%	958
2004	645	71%	269	29%	914
2005	656	73%	241	27%	897
2006	585	72%	229	28%	814
2007	532	72%	208	28%	740
2008	534	73%	196	27%	730
2009	529	76%	163	24%	692
2010	498	72%	191	28%	689
2011	488	72%	194	28%	682
2012	517	74%	177	26%	694

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 2. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Massachusetts<sup>1</sup>, 2003–2012<sup>2</sup>**

	White (NH)		Black (NH)		Hispanic/ Latino		API		Total <sup>3</sup>
	N	%	N	%	N	%	N	%	N
2003	382	40%	336	35%	222	23%	12	1%	958
2004	346	38%	305	33%	242	26%	15	2%	914
2005	358	40%	304	34%	217	24%	16	2%	897
2006	339	42%	253	31%	198	24%	19	2%	814
2007	314	42%	234	32%	173	23%	16	2%	740
2008	290	40%	243	33%	163	22%	27	4%	730
2009	279	40%	226	33%	165	24%	19	3%	692
2010	277	40%	214	31%	174	25%	21	3%	689
2011	235	34%	240	35%	169	25%	26	4%	682
2012	265	38%	211	30%	190	27%	19	3%	694

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Totals include American Indian/Alaskan Native individuals and those of other or undetermined race/ethnicity

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 3. Males diagnosed with HIV infection by race/ethnicity and year of diagnosis: Massachusetts<sup>1</sup>, 2003–2012<sup>2</sup>**

	White (NH)		Black (NH)		Hispanic/ Latino		API		Total <sup>3</sup>
	N	%	N	%	N	%	N	%	N
2003	322	50%	176	27%	139	21%	8	1%	649
2004	303	47%	167	26%	160	25%	11	2%	645
2005	320	49%	170	26%	152	23%	14	2%	656
2006	292	50%	131	22%	142	24%	15	3%	585
2007	259	49%	138	26%	123	23%	10	2%	532
2008	260	49%	134	25%	110	21%	23	4%	534
2009	245	46%	143	27%	123	23%	16	3%	529
2010	242	49%	112	22%	126	25%	17	3%	498
2011	197	40%	136	28%	125	26%	21	4%	488
2012	235	45%	114	22%	147	28%	16	3%	517

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Totals include American Indian/Alaskan Native individuals and those of other or undetermined race/ethnicity

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 4. Females diagnosed with HIV infection by race/ethnicity and year of diagnosis: Massachusetts<sup>1</sup>, 2003–2012<sup>2</sup>**

	White (NH)		Black (NH)		Hispanic/ Latina		API		Total <sup>3</sup>
	N	%	N	%	N	%	N	%	N
2003	60	19%	160	52%	83	27%	4	1%	309
2004	43	16%	138	51%	82	30%	4	1%	269
2005	38	16%	134	56%	65	27%	2	1%	241
2006	47	21%	122	53%	56	24%	4	2%	229
2007	55	26%	96	46%	50	24%	6	3%	208
2008	30	15%	109	56%	53	27%	4	2%	196
2009	34	21%	83	51%	42	26%	3	2%	163
2010	35	18%	102	53%	48	25%	4	2%	191
2011	38	20%	104	54%	44	23%	5	3%	194
2012	30	17%	97	55%	43	24%	3	2%	177

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Totals include American Indian/Alaskan Native individuals and those of other or undetermined race/ethnicity

(NH) = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 5. People diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts<sup>1</sup>, 2003–2012<sup>2</sup>**

	US		Puerto Rico/ US Dependency <sup>3</sup>		Non-US		Total
	N	%	N	%	N	%	
2003	581	61%	81	8%	296	31%	<b>958</b>
2004	548	60%	99	11%	267	29%	<b>914</b>
2005	540	60%	82	9%	275	31%	<b>897</b>
2006	503	62%	58	7%	253	31%	<b>814</b>
2007	458	62%	56	8%	226	31%	<b>740</b>
2008	443	61%	67	9%	220	30%	<b>730</b>
2009	433	63%	48	7%	211	30%	<b>692</b>
2010	431	63%	43	6%	215	31%	<b>689</b>
2011	407	60%	41	6%	234	34%	<b>682</b>
2012	391	56%	62	9%	241	35%	<b>694</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-eight percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 1% were born in an unknown dependency.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 6. Males diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts<sup>1</sup>, 2003–2012<sup>2</sup>**

	US		Puerto Rico/ US Dependency <sup>3</sup>		Non-US		Total
	N	%	N	%	N	%	
2003	451	69%	41	6%	157	24%	<b>649</b>
2004	439	68%	64	10%	142	22%	<b>645</b>
2005	434	66%	58	9%	164	25%	<b>656</b>
2006	391	67%	40	7%	154	26%	<b>585</b>
2007	358	67%	38	7%	136	26%	<b>532</b>
2008	364	68%	42	8%	128	24%	<b>534</b>
2009	362	68%	31	6%	136	26%	<b>529</b>
2010	356	71%	34	7%	108	22%	<b>498</b>
2011	320	66%	30	6%	138	28%	<b>488</b>
2012	320	62%	49	9%	148	29%	<b>517</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-eight percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 1% were born in an unknown dependency.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 7. Females diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts<sup>1</sup> 2003–2012<sup>2</sup>**

	US		Puerto Rico/ US Dependency <sup>3</sup>		Non-US		Total
	N	%	N	%	N	%	
2003	130	42%	40	13%	139	45%	<b>309</b>
2004	109	41%	35	13%	125	46%	<b>269</b>
2005	106	44%	24	10%	111	46%	<b>241</b>
2006	112	49%	18	8%	99	43%	<b>229</b>
2007	100	48%	18	9%	90	43%	<b>208</b>
2008	79	40%	25	13%	92	47%	<b>196</b>
2009	71	44%	17	10%	75	46%	<b>163</b>
2010	75	39%	9	5%	107	56%	<b>191</b>
2011	87	45%	11	6%	96	49%	<b>194</b>
2012	71	40%	13	7%	93	53%	<b>177</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-eight percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 1% were born in an unknown dependency.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 8. People diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts<sup>1</sup>, 2003–2012<sup>2</sup>**

	MSM		IDU		MSM/ IDU		HTSX		Pres. HTSX <sup>3</sup>		Undeter- mined <sup>4</sup>		Total <sup>5</sup>
	N	%	N	%	N	%	N	%	N	%	N	%	N
2003	318	33%	146	15%	32	3%	136	14%	129	13%	184	19%	958
2004	292	32%	146	16%	26	3%	137	15%	109	12%	193	21%	914
2005	351	39%	121	13%	22	2%	110	12%	100	11%	188	21%	897
2006	339	42%	96	12%	18	2%	101	12%	102	13%	152	19%	814
2007	292	39%	96	13%	22	3%	81	11%	82	11%	162	22%	740
2008	288	39%	70	10%	29	4%	93	13%	81	11%	163	22%	730
2009	310	45%	46	7%	18	3%	90	13%	64	9%	159	23%	692
2010	292	42%	67	10%	22	3%	84	12%	82	12%	136	20%	689
2011	272	40%	62	9%	19	3%	85	12%	80	12%	161	24%	682
2012	317	46%	43	6%	22	3%	59	9%	93	13%	156	22%	694

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>5</sup> Totals include pediatric and blood/blood products exposure modes

MSM = Male-to-Male Sex; IDU = Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

*Note: The category of “presumed heterosexual” is used in Massachusetts to re-assign females who are reported with an exposure of heterosexual sex, but only with a partner of unknown HIV status or behavioral risk. Massachusetts uses the category of presumed heterosexual to distinguish these female cases from other undetermined cases about which we know less. Prior to January 1, 2011, the presumed heterosexual category was also used to report HIV data in males. The rationale for the application of the presumed heterosexual exposure mode category to females only has been addressed in the MDPH OHA report “Intersecting Risks: HIV Infection among Heterosexual Women and Men in Massachusetts.” (2010)*

*[http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting\\_risks.pdf](http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting_risks.pdf). Nationally, the Centers for Disease Control and Prevention categorize “presumed heterosexual” cases as “no identified risk” (NIR). As such, comparisons of the presumed heterosexual category cannot be made to national data. Caution should be used in interpreting data for presumed heterosexual, as it is still not clear what the exposure risk was for females in this category. Although a person may not report other risk behaviors, such as injection drug use to a health care provider, it does not exclude the possibility that an individual has experienced these other risks. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a limited patient-provider relationship or stigma.*



**Table 9. Males diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts<sup>1</sup>, 2003–2012<sup>2</sup>**

	MSM		IDU		MSM/ IDU		HTSX		Undeter- mined <sup>3</sup>		Total <sup>4</sup>
	N	%	N	%	N	%	N	%	N	%	N
2003	318	49%	94	14%	32	5%	45	7%	150	23%	<b>649</b>
2004	292	45%	100	16%	26	4%	48	7%	174	27%	<b>645</b>
2005	351	54%	89	14%	22	3%	36	5%	158	24%	<b>656</b>
2006	339	58%	49	8%	18	3%	42	7%	134	23%	<b>585</b>
2007	292	55%	58	11%	22	4%	27	5%	131	25%	<b>532</b>
2008	288	54%	44	8%	29	5%	29	5%	138	26%	<b>534</b>
2009	310	59%	32	6%	18	3%	27	5%	140	26%	<b>529</b>
2010	292	59%	45	9%	22	4%	28	6%	108	22%	<b>498</b>
2011	272	56%	40	8%	19	4%	23	5%	133	27%	<b>488</b>
2012	317	61%	21	4%	22	4%	27	5%	127	25%	<b>517</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>4</sup> Totals include pediatric and blood/blood products exposure modes.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; HTSX = Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 10. Females diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts<sup>1</sup>, 2003–2012<sup>2</sup>**

	IDU		HTSX		Pres. HTSX <sup>3</sup>		Undeter-mined <sup>4</sup>		Total <sup>5</sup>
	N	%	N	%	N	%	N	%	N
2003	52	17%	91	29%	129	42%	34	11%	<b>309</b>
2004	46	17%	89	33%	109	41%	19	7%	<b>269</b>
2005	32	13%	74	31%	100	41%	30	12%	<b>241</b>
2006	47	21%	59	26%	102	45%	18	8%	<b>229</b>
2007	38	18%	54	26%	82	39%	31	15%	<b>208</b>
2008	26	13%	64	33%	81	41%	25	13%	<b>196</b>
2009	14	9%	63	39%	64	39%	19	12%	<b>163</b>
2010	22	12%	56	29%	82	43%	28	15%	<b>191</b>
2011	22	11%	62	32%	80	41%	28	14%	<b>194</b>
2012	22	12%	32	18%	93	53%	29	16%	<b>177</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>4</sup> Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

<sup>5</sup> Totals include pediatric and blood/blood products exposure modes

IDU = Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 11. People diagnosed with HIV infection by age at diagnosis: Massachusetts<sup>1</sup>, 2003–2012<sup>2</sup>**

	<13		13–19		20–24		25–29		30–34		35–39		40–44		45–49		50–54		55–59		60+		Total
Year	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2003	4	<1%	22	2%	69	7%	126	12%	185	18%	227	21%	184	17%	107	10%	67	6%	35	3%	30	3%	1,056
2004	8	1%	19	2%	60	6%	94	10%	158	16%	207	22%	167	17%	119	12%	66	7%	29	3%	31	3%	958
2005	10	1%	20	2%	55	6%	96	11%	134	15%	182	20%	165	18%	116	13%	70	8%	37	4%	29	3%	914
2006	5	1%	8	1%	59	7%	88	10%	143	16%	154	17%	190	21%	127	14%	61	7%	37	4%	25	3%	897
2007	5	1%	21	3%	61	7%	91	11%	99	12%	144	18%	146	18%	116	14%	66	8%	41	5%	24	3%	814
2008	4	1%	13	2%	53	7%	81	11%	85	11%	133	18%	130	18%	111	15%	62	8%	36	5%	32	4%	740
2009	6	1%	18	2%	59	8%	101	14%	91	12%	78	11%	124	17%	104	14%	72	10%	42	6%	35	5%	730
2010	3	<1%	19	3%	60	9%	69	10%	94	14%	89	13%	107	15%	114	16%	63	9%	38	5%	36	5%	692
2011	6	1%	11	2%	62	9%	67	10%	84	12%	110	16%	97	14%	101	15%	77	11%	40	6%	34	5%	689
2012	3	<1%	22	3%	69	10%	73	11%	84	12%	90	13%	114	17%	94	14%	58	9%	38	6%	37	5%	682

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 12. Males diagnosed with HIV infection by age at diagnosis: Massachusetts<sup>1</sup>, 2003–2012<sup>2</sup>**

	<13		13–19		20–24		25–29		30–34		35–39		40–44		45–49		50–54		55–59		60+		Total
Year	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2003	2	<1%	10	1%	39	5%	73	10%	116	16%	163	23%	130	18%	80	11%	51	7%	24	3%	25	4%	713
2004	6	1%	10	2%	35	5%	47	7%	109	17%	155	24%	117	18%	75	12%	52	8%	23	4%	20	3%	649
2005	4	1%	10	2%	37	6%	62	10%	88	14%	145	22%	117	18%	85	13%	44	7%	30	5%	23	4%	645
2006	0	0%	5	1%	40	6%	65	10%	101	15%	115	18%	146	22%	97	15%	45	7%	26	4%	16	2%	656
2007	3	1%	10	2%	39	7%	60	10%	70	12%	112	19%	109	19%	85	15%	52	9%	27	5%	18	3%	585
2008	1	<1%	6	1%	40	8%	57	11%	54	10%	101	19%	95	18%	81	15%	51	10%	25	5%	21	4%	532
2009	6	1%	12	2%	48	9%	73	14%	62	12%	54	10%	91	17%	80	15%	52	10%	30	6%	26	5%	534
2010	1	<1%	14	3%	50	9%	55	10%	68	13%	67	13%	81	15%	96	18%	45	9%	26	5%	26	5%	529
2011	3	1%	6	1%	45	9%	52	10%	59	12%	75	15%	74	15%	81	16%	58	12%	23	5%	22	4%	498
2012	1	<1%	12	2%	57	12%	57	12%	55	11%	62	13%	85	17%	68	14%	42	9%	26	5%	23	5%	488

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the

implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 13. *Females* diagnosed with HIV infection by age at diagnosis: Massachusetts<sup>1</sup>, 2003–2012<sup>2</sup>**

	<13		13–19		20–24		25–29		30–34		35–39		40–44		45–49		50–54		55–59		60+		Total
Year	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2003	2	1%	12	3%	30	9%	53	15%	69	20%	64	19%	54	16%	27	8%	16	5%	11	3%	5	1%	<b>343</b>
2004	2	1%	9	3%	25	8%	47	15%	49	16%	52	17%	50	16%	44	14%	14	5%	6	2%	11	4%	<b>309</b>
2005	6	2%	10	4%	18	7%	34	13%	46	17%	37	14%	48	18%	31	12%	26	10%	7	3%	6	2%	<b>269</b>
2006	5	2%	3	1%	19	8%	23	10%	42	17%	39	16%	44	18%	30	12%	16	7%	11	5%	9	4%	<b>241</b>
2007	2	1%	11	5%	22	10%	31	14%	29	13%	32	14%	37	16%	31	14%	14	6%	14	6%	6	3%	<b>229</b>
2008	3	1%	7	3%	13	6%	24	12%	31	15%	32	15%	35	17%	30	14%	11	5%	11	5%	11	5%	<b>208</b>
2009	0	0%	6	3%	11	6%	28	14%	29	15%	24	12%	33	17%	24	12%	20	10%	12	6%	9	5%	<b>196</b>
2010	2	1%	5	3%	10	6%	14	9%	26	16%	22	13%	26	16%	18	11%	18	11%	12	7%	10	6%	<b>163</b>
2011	3	2%	5	3%	17	9%	15	8%	25	13%	35	18%	23	12%	20	10%	19	10%	17	9%	12	6%	<b>191</b>
2012	2	1%	10	5%	12	6%	16	8%	29	15%	28	14%	29	15%	26	13%	16	8%	12	6%	14	7%	<b>194</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 14. People diagnosed with HIV infection by Health Service Region (HSR)<sup>1</sup>: Massachusetts<sup>2</sup>, 2003–2012<sup>3</sup>**

	Boston		Central		Metro West		Northeast		Southeast		Western		Prisons <sup>4</sup>		Total <sup>5</sup>
Year	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2003	345	33%	106	10%	154	15%	166	16%	157	15%	104	10%	24	2%	<b>1,056</b>
2004	307	32%	87	9%	150	16%	165	17%	118	12%	100	10%	30	3%	<b>958</b>
2005	266	29%	84	9%	126	14%	158	17%	115	13%	121	13%	43	5%	<b>914</b>
2006	289	32%	72	8%	141	16%	154	17%	109	12%	97	11%	35	4%	<b>897</b>
2007	246	30%	81	10%	109	13%	142	17%	117	14%	92	11%	26	3%	<b>814</b>
2008	218	29%	61	8%	126	17%	118	16%	115	16%	79	11%	23	3%	<b>740</b>
2009	207	28%	58	8%	123	17%	140	19%	95	13%	76	10%	31	4%	<b>730</b>
2010	199	29%	54	8%	130	19%	111	16%	115	17%	64	9%	19	3%	<b>692</b>
2011	212	31%	59	9%	115	17%	114	17%	90	13%	76	11%	23	3%	<b>689</b>
2012	219	32%	61	9%	103	15%	115	17%	90	13%	69	10%	24	4%	<b>682</b>

<sup>1</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at [http://www.mass.gov/dph/aids/research/profile2005/app5\\_hrs\\_maps.pdf](http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf) for configuration of health service regions.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. See Epidemiologic Profile General Appendices, Health Service Region Maps, available at [http://www.mass.gov/dph/aids/research/profile2005/app5\\_hrs\\_maps.pdf](http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf) for configuration of health service regions. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

<sup>5</sup> Totals include two people of unknown HSR

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

## People diagnosed with HIV infection from 2010–2012

**Table 15. People diagnosed with HIV infection by gender and race/ethnicity: Massachusetts<sup>1</sup>, 2010–2012<sup>2</sup>**

Race/Ethnicity:	Male		Female	
	N	%	N	%
White, non-Hispanic	674	45%	103	18%
Black, non-Hispanic	362	24%	303	54%
Hispanic/Latino	398	26%	135	24%
Asian/Pacific Islander	54	4%	12	2%
Other/Unknown	15	1%	9	2%
<b>Total</b>	<b>1,503</b>	<b>100%</b>	<b>562</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/14

**Table 16. People diagnosed with HIV infection by gender and exposure mode: Massachusetts<sup>1</sup>, 2010–2012<sup>2</sup>**

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	881	59%	N/A	N/A
Injection drug use (IDU)	106	7%	66	12%
MSM/IDU	63	4%	N/A	N/A
Heterosexual sex	78	5%	150	27%
Other	7	<1%	6	1%
Total undetermined/other	368	24%	340	60%
• Presumed Heterosexual Sex <sup>3</sup>	N/A	N/A	255	45%
• Undetermined <sup>4</sup>	368	24%	85	15%
<b>Total</b>	<b>1,503</b>	<b>100%</b>	<b>562</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A = Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 17. People diagnosed with HIV infection by race/ethnicity<sup>1</sup> and place of birth: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

Race/Ethnicity:	US		Puerto Rico/ US Dependency <sup>4</sup>		Non-US	
	N	%	N	%	N	%
White (NH)	712	92%	-- <sup>6</sup>	<1%	64	8%
Black (NH)	300	45%	-- <sup>6</sup>	<1%	364	55%
Hispanic/Latino	180	34%	144	27%	209	39%
API	20	30%	0	0%	46	70%
<b>Total</b>	<b>1,229</b>	<b>60%</b>	<b>--<sup>6</sup></b>	<b>7%</b>	<b>690</b>	<b>33%</b>

<sup>1</sup> Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Ninety-eight percent of people diagnosed with HIV infection from 2010–2012 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>5</sup> Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.

<sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 18. Males diagnosed with HIV infection by race/ethnicity<sup>1</sup> and place of birth: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

Race/Ethnicity:	US		Puerto Rico/ US Dependency <sup>4</sup>		Non-US	
	N	%	N	%	N	%
White (NH)	615	91%	0	0%	59	9%
Black (NH)	215	59%	0	0%	147	41%
Hispanic/Latino	135	34%	113	28%	150	38%
API	18	33%	0	0%	36	67%
<b>All Males<sup>5</sup></b>	<b>996</b>	<b>66%</b>	<b>113</b>	<b>8%</b>	<b>394</b>	<b>26%</b>

<sup>1</sup> Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.  
<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.  
<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.  
<sup>4</sup> Ninety-eight percent of people diagnosed with HIV infection from 2010–2012 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.  
<sup>5</sup> Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.  
<sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.  
(NH) = Non-Hispanic, API = Asian/Pacific Islander  
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 19. Females diagnosed with HIV infection by race/ethnicity<sup>1</sup> and place of birth: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

Race/Ethnicity:	US		Puerto Rico/ US Dependency <sup>4</sup>		Non-US	
	N	%	N	%	N	%
White (NH)	97	94%	-- <sup>6</sup>	1%	5	5%
Black (NH)	85	28%	-- <sup>6</sup>	<1%	217	72%
Hispanic/Latino	45	33%	31	23%	59	44%
<b>All Females<sup>5</sup></b>	<b>233</b>	<b>41%</b>	<b>--<sup>6</sup></b>	<b>6%</b>	<b>296</b>	<b>53%</b>

<sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.  
<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.  
<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.  
<sup>4</sup> Ninety-eight percent of people diagnosed with HIV infection from 2010–2012 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.  
<sup>5</sup> Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.  
<sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.  
(NH) = Non-Hispanic  
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14



**Table 20. People diagnosed with HIV infection by race/ethnicity<sup>1</sup> and exposure mode: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

Exposure Mode:	White (NH)		Black (NH)		Hispanic/Latino	
	N	%	N	%	N	%
Male-to-male sex (MSM)	506	65%	135	20%	190	36%
Injection drug use (IDU)	72	9%	28	4%	69	13%
MSM/IDU	48	6%	6	1%	-- <sup>6</sup>	-- <sup>6</sup>
Heterosexual sex	31	4%	108	16%	80	15%
Other	0	0%	9	1%	-- <sup>6</sup>	-- <sup>6</sup>
Total undetermined/other	120	15%	379	57%	182	34%
• Presumed heterosexual sex <sup>4</sup>	23	3%	174	26%	47	9%
• Undetermined <sup>5</sup>	97	12%	205	31%	135	25%
<b>Total</b>	<b>777</b>	<b>100%</b>	<b>665</b>	<b>100%</b>	<b>533</b>	<b>100%</b>

<sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>5</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 21. Males diagnosed with HIV infection by race/ethnicity<sup>1</sup> and exposure mode: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

Exposure Mode:	White (NH)		Black (NH)		Hispanic/Latino	
	N	%	N	%	N	%
Male-to-male sex (MSM)	506	75%	135	37%	190	48%
Injection drug use (IDU)	29	4%	22	6%	52	13%
MSM/IDU	48	7%	6	2%	8	2%
Heterosexual sex	10	1%	32	9%	34	9%
Undetermined <sup>4</sup>	81	12%	163	45%	111	28%
<b>Total<sup>5</sup></b>	<b>674</b>	<b>100%</b>	<b>362</b>	<b>100%</b>	<b>398</b>	<b>100%</b>

<sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>5</sup> Totals include pediatric and blood/blood products exposure modes.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 22. Females diagnosed with HIV infection by race/ethnicity<sup>1</sup> and exposure mode: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

Exposure Mode:	White (NH)		Black (NH)		Hispanic/Latina	
	N	%	N	%	N	%
Injection drug use	43	42%	6	2%	17	13%
Heterosexual sex	21	20%	76	25%	46	34%
Total undetermined/other	39	38%	216	71%	71	53%
• Presumed heterosexual sex <sup>4</sup>	23	22%	174	57%	47	35%
• Undetermined <sup>5</sup>	16	16%	42	14%	24	18%
<b>Total<sup>6</sup></b>	<b>103</b>	<b>100%</b>	<b>303</b>	<b>100%</b>	<b>135</b>	<b>100%</b>

<sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>5</sup> Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

<sup>6</sup> Totals include pediatric and blood/blood products exposure modes.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 23. People diagnosed with HIV infection by Health Service Region (HSR)<sup>1</sup> and gender: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

Health Service Region:	Male		Female		Total
	N	%	N	%	N
Boston HSR	485	78%	140	22%	<b>625</b>
Central HSR	114	63%	66	37%	<b>180</b>
Metro West HSR	234	73%	88	27%	<b>322</b>
Northeast HSR	252	69%	115	31%	<b>367</b>
Southeast HSR	201	72%	80	28%	<b>281</b>
Western HSR	167	72%	66	28%	<b>233</b>
Prisons <sup>4</sup>	48	87%	7	13%	<b>55</b>
<b>Mass. Total</b>	<b>1,503</b>	<b>73%</b>	<b>562</b>	<b>27%</b>	<b>2,065</b>

<sup>1</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at [http://www.mass.gov/dph/aids/research/profile2005/app5\\_hrs\\_maps.pdf](http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf) for configuration of health service regions.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999

<sup>4</sup> HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 24. Percentage distribution of people diagnosed with HIV infection by Health Service Region (HSR)<sup>1</sup> and race/ethnicity: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

	White (NH)	Black (NH)	Hispanic/ Latino	API	Total
HSR	%	%	%	%	N
Boston HSR	32%	37%	25%	3%	<b>625</b>
Central HSR	34%	34%	27%	3%	<b>180</b>
Metro West HSR	43%	34%	19%	5%	<b>322</b>
Northeast HSR	37%	28%	30%	5%	<b>367</b>
Southeast HSR	53%	32%	13%	1%	<b>281</b>
Western HSR	34%	24%	41%	1%	<b>233</b>
Prisons <sup>4</sup>	25%	27%	42%	4%	<b>55</b>
<b>Mass. Total</b>	<b>38%</b>	<b>32%</b>	<b>26%</b>	<b>3%</b>	<b>2,065</b>

<sup>1</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at [http://www.mass.gov/dph/aids/research/profile2005/app5\\_hrs\\_maps.pdf](http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf) for configuration of health service regions.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

(NH) = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 25. Percentage distribution of people diagnosed with HIV infection by Health Service Region (HSR)<sup>1</sup> and exposure mode: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

	MSM	IDU	MSM/ IDU	HTSX	Other	Pres. HTSX <sup>4</sup>	Undet. <sup>5</sup>	Total
HSR	%	%	%	%	%	%	%	N
Boston	50%	6%	3%	10%	1%	11%	20%	<b>625</b>
Central	33%	11%	3%	15%	0%	19%	19%	<b>180</b>
Metro West	47%	3%	2%	10%	1%	13%	24%	<b>322</b>
Northeast	36%	8%	3%	14%	0%	11%	28%	<b>367</b>
Southeast	44%	8%	4%	9%	0%	15%	21%	<b>281</b>
Western	40%	12%	2%	12%	1%	12%	21%	<b>233</b>
Prison <sup>6</sup>	18%	45%	7%	11%	0%	2%	16%	<b>55</b>
<b>Total</b>	<b>43%</b>	<b>8%</b>	<b>3%</b>	<b>11%</b>	<b>1%</b>	<b>12%</b>	<b>22%</b>	<b>2,065</b>

<sup>1</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at

[http://www.mass.gov/dph/aids/research/profile2005/app5\\_hrs\\_maps.pdf](http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf) for configuration of health service regions.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>5</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>6</sup> HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex; Undet. = Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

## **Profile of people testing for HIV at publicly-funded sites**

### Technical Notes:

Program utilization data for HIV/AIDS prevention services describe people who utilize these services and who may be at risk for HIV infection. The following tables contain data on clients utilizing state-funded counseling and testing sites. These settings include community health centers, hospitals, jails and sexually transmitted disease clinics. An estimated 30% of people who get tested for HIV infection in Massachusetts get tested at one of these sites; therefore, these data are not representative of all people testing for HIV infection in Massachusetts. It is important to note that the data presented in this section represent tests performed and not individual clients; therefore the data may contain more than one test for some people.

<b>Table 26. Number and percent of positive HIV tests<sup>1</sup> by gender, race/ethnicity, and age of client: Massachusetts, 2012</b>			
<b>HIV Tests by Gender of Client:</b>	<b>Total Tests</b>	<b>Total Positive Results<sup>2</sup></b>	<b>Percent Positive</b>
Male	38,421	483	1.3%
Female	27,509	185	0.7%
Transgender	280	7	2.5%
Unknown <sup>2</sup>	455	4	0.9%
<b>HIV Tests by Race/Ethnicity of Client:</b>	<b>Total Tests</b>	<b>Total Positive Results</b>	<b>Percent Positive</b>
White (non-Hispanic)	22,037	223	1.0%
Black (non-Hispanic)	20,288	224	1.1%
Hispanic/Latino	19,261	186	1.0%
Asian	1,610	16	1.0%
Native Hawaiian/Pacific Islander	64	<5	n/a
American Indian/Alaska Native	161	<5	n/a
Multi-race	686	7	1.0%
Unknown <sup>3</sup>	2,558	21	0.8%
<b>HIV Tests by Age of Client, in Years:</b>	<b>Total Tests</b>	<b>Total Positive Results</b>	<b>Percent Positive</b>
Under 13	59	0	0.0%
13 to 19	4,366	16	0.4%
20 to 24	13,044	61	0.5%
25 to 29	12,659	92	0.7%
30 to 34	9,630	95	1.0%
35 to 39	6,578	73	1.1%
40 to 44	5,879	77	1.3%
45 to 49	4,922	104	2.1%
50 to 54	3,790	65	1.7%
55 to 59	2,268	56	2.5%
60 +	2,491	30	1.2%
Unknown <sup>3</sup>	979	10	1.0%
<b>Total</b>	<b>66,665</b>	<b>679</b>	<b>1.0%</b>
<sup>1</sup> Tests performed at publicly funded HIV counseling and testing sites			
<sup>2</sup> Positive tests include both new and previously known positive tests based on client self report			
<sup>3</sup> Unknown indicates that the data were missing or unreadable			
Data Source: MDPH Office of HIV/AIDS HIV Counseling and Testing Program; data as of 2/14/13			

**Technical Notes:**

The following tables include data about number of sexual partners and condom use as reported by Massachusetts residents through anonymous telephone interviews in 2011 and 2012. This ongoing random-digit-dial telephone survey, the Behavioral Risk Factor Surveillance System (BRFSS), covers a broad range of topic areas (including sexually-related risk) and is part of a CDC-funded national survey program.

Sex with multiple partners has historically been correlated with other predictors of HIV transmission. Reducing numbers of sexual partners has been an HIV/STD prevention intervention strategy, as has increasing condom use. Data regarding the prevalence of each of these behaviors follows.

<b>Table 27. Number of sexual partners in past year<sup>1</sup> among adult BRFSS respondents ages 18–64 years: Massachusetts, 2011–2012</b>				
	<b>0 Partners</b>	<b>1 Partner</b>	<b>2 + Partners</b>	<b>N<sup>2</sup></b>
<b>Total:</b>	<b>19.8%</b>	<b>70.3%</b>	<b>9.9%</b>	<b>7,001</b>
<b>Age in Years:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2 + Partners</b>	<b>N</b>
18–24	24.3%	45.5%	30.1%	242
25–34	12.3%	77.5%	10.2%	778
35–44	10.9%	82.1%	7.0%	1,386
45–64	25.6%	70.6%	3.8%	4,490
<b>Sex:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2 + Partners</b>	<b>N</b>
Male	17.4%	68.2%	14.4%	2,697
Female	22.2%	72.3%	5.4%	4,304
<b>Race/Ethnicity:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2 + Partners</b>	<b>N</b>
White (non-Hispanic)	19.2%	71.6%	9.3%	5,588
Black (non-Hispanic)	23.2%	68.0%	8.9%	470
Hispanic/Latino	21.7%	66.7%	11.6%	533
<sup>1</sup> "Number of sexual partners in past year" is a state-added question administered to a sub-sample of BRFSS respondents and represents the number of people a respondent reports having sex with. Sex was defined by the interviewer as including oral, vaginal, or anal sex.				
<sup>2</sup> Only respondents with known values are included in this table. Column sub-totals may not equal overall total due to missing values.				
<sup>3</sup> Unstable estimates with N < 50 or relative standard error >30% are suppressed				
Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2011–2012				



<b>Table 28. Number of sexual partners in the past year<sup>1</sup>, male BRFSS respondents ages 18–64: Massachusetts, 2011–2012</b>				
	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>N<sup>2</sup></b>
<b>Total Males</b>	<b>17.4%</b>	<b>68.2%</b>	<b>14.4%</b>	<b>2,697</b>
<b>Age in Years:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>N</b>
18–24	27.0%	33.2%	39.9%	<b>107</b>
25–34	13.9%	72.6%	13.4%	<b>288</b>
35–44	9.1%	80.7%	10.2%	<b>505</b>
45–64	19.1%	74.1%	6.8%	<b>1,770</b>
<b>Race/Ethnicity:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>N</b>
White (non-Hispanic)	17.1%	69.3%	13.7%	<b>2,192</b>
Black (non-Hispanic)	14.7%	71.2%	14.2%	<b>156</b>
Hispanic/Latino	24.3%	62.0%	13.7%	<b>167</b>
<b>Sex of Partner<sup>4</sup>:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>N</b>
Same Sex	Not Applicable	63.1%	36.9%	<b>111</b>
Opposite Sex	Not Applicable	84.0%	16.0%	<b>2,044</b>
<sup>1</sup> "Number of sexual partners in past year" is a state-added question administered to a sub-sample of BRFSS respondents and represents the number of people a respondent reports having sex with. Sex was defined by the interviewer as including oral, vaginal, or anal sex. <sup>2</sup> Only respondents with known values are included in this table. Column sub-totals may not equal the overall total due to missing values. <sup>3</sup> Unstable estimates with N < 50 or relative standard error >30% are suppressed <sup>4</sup> Only asked of adults reporting sex (including oral, vaginal, or anal sex) in the past year Data source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2011–2012				

<b>Table 29. Number of sexual partners in the past year<sup>1</sup>, female BRFSS respondents ages 18–64 Massachusetts, 2011–2012</b>				
	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>N<sup>2</sup></b>
<b>Total Females</b>	<b>22.2%</b>	<b>72.3%</b>	<b>5.4%</b>	<b>4,304</b>
<b>Age in Years:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>N</b>
18–24	21.3%	59.8%	18.9%	135
25–34	10.7%	82.3%	7.0%	490
35–44	12.5%	83.4%	4.1%	881
45–64	31.9%	67.3%	0.9%	2,720
<b>Race/Ethnicity:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>N</b>
White (non-Hispanic)	21.2%	73.8%	4.9%	3,396
Black (non-Hispanic)	31.8%	64.7%	3.5%	314
Hispanic/Latino	19.5%	70.7%	9.9%	366
<b>Sex of Partner<sup>4</sup>:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>N</b>
Same sex	Not Applicable	99.3%	0.7%	78
Opposite sex	Not Applicable	93.2%	6.8%	2,905
<sup>1</sup> "Number of sexual partners in past year" is a state-added question administered to a sub-sample of BRFSS respondents and represents the number of people a respondent reports having sex with. Sex was defined by the interviewer as including oral, vaginal, or anal sex. <sup>2</sup> Only respondents with known values are included in this table. Column sub-totals may not equal overall total due to missing values. <sup>3</sup> Unstable estimates with N < 50 or relative standard error >30% are suppressed <sup>4</sup> Only asked of adults reporting sex (including oral, vaginal, or anal sex) in the past year Data source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2011–2012				

<b>Table 30. Condom use at last sex, BRFSS respondents ages 18–64<sup>1</sup>: Massachusetts, 2011–2012</b>		
	<b>% Used Condom</b>	<b>Total N<sup>2</sup></b>
<b>Total:</b>	<b>25.3%</b>	<b>5,153</b>
<b>Sex:</b>	<b>% Used Condom</b>	<b>Total N</b>
Male	29.1%	2,175
Female	21.3%	2,978
<b>Race/Ethnicity:</b>	<b>% Used Condom</b>	<b>Total N</b>
White (non-Hispanic)	24.3%	4,151
Black (non-Hispanic)	32.4%	336
Hispanic/Latino	23.8%	371
<b>Number of Partners:</b>	<b>% Used Condom</b>	<b>Total N</b>
1	20.0%	4,791
2	40.4%	183
3+	75.0%	141
<b>Sex of Partner:</b>	<b>% Used Condom</b>	<b>Total N</b>
Male Respondent Reporting Sex with Only Male	46.3%	114
Male Respondent Reporting Sex with Only Female	28.1%	2,053
Female Respondent Reporting Sex with Only Female	15.1%	78
Female Respondent Reporting Sex with Only Male	21.2%	2,894
<sup>1</sup> Only asked of adults reporting sex (including oral, vaginal, or anal sex) in the past year		
<sup>2</sup> Only respondents with known values are included in this table; Column sub-totals may not equal overall total due to missing values		
<sup>3</sup> Unstable estimates with N < 50 or relative standard error >30% are suppressed		
Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2011–2012		

**Table 31. Ever tested for HIV<sup>1</sup>, BRFSS respondents age 18–64: Massachusetts, 2011–2012<sup>2</sup>**

Year:	Total N <sup>3</sup>	% Ever Tested for HIV
2011	13,502	45.5%
2012	13,609	42.9%

<sup>1</sup> This question was one of the core federal questions posed to all respondents to the annual BRFSS between the ages of 18-64  
<sup>2</sup> 2011 data are not presented because new weighting methodology (raking weight) implemented by CDC in 2011 makes this year not comparable with previous years.

<sup>3</sup> Respondents with missing values for this item were not included in this table.

Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 1994–2010

**Table 32. Ever tested for HIV by number of sexual partners in past year<sup>1</sup>, BRFSS respondents age 18–64: Massachusetts, 2011–2012**

	Total N <sup>2</sup>	% Ever Tested for HIV
<b>Total:</b>	<b>6,709</b>	<b>43.9%</b>
<b>Number of Partners:</b>	<b>Total N</b>	<b>% Ever Tested for HIV</b>
0	1,707	32.1%
1	4,684	46.8%
2	178	38.5%
3+	140	52.8%

<sup>1</sup> “Number of sexual partners in past year” is a state-added question administered to a sub-sample of BRFSS respondents and represents the number of people a respondent reports having sex with. Sex was defined by the interviewer as including oral, vaginal, or anal sex.

<sup>2</sup> Total number of participants that responded to both number of sexual partners and ever tested for HIV

<sup>3</sup> Unstable estimates with N < 50 or relative standard error >30% are suppressed

Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2011–2012